1 MQTCPLAFPG HVSQALGTLL FLAASLSAQN EGWDSPICTE GVVSVSWGEN

51 TVMSCNISNA FSHVNIKLRA HGQESAIFNE VAPGYFSRDG WQLQVQGGVA

101 QLVIKGARDS HAGLYMWHLV GHQRNNRQVT LEVSGAEPQS APDTGFWPVP

151 AVVTAVFILL VALVMFAWYR CRCSQQRREK KFFLLEPQMK VAALRAGAQQ

201 GLSRASAELW TPDSEPTPRP LALVFKPSPL GALELLSPQP LFPYAADP*

Fig.1

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K12 promoter (1-195) and cDNA (196-2180)sequence

```
   1  ATTCCTGCTT CCTTTAGCGT GAACGCGGT GCGGTGCCTC CCGTGAAATA
  51  ATAAATTCAC CGTCACGCTT GTTGTGAACG CGGGTGGTTC CCGAAACTTG
 101  GAGGCTTCCC GTAAACCCAG CTCCTTCCTC ATCTGGGAGG TGGGTCCCGC
                                                      ↓
 151  GCGGGTCCGC CGCCTCCTCC CTGGCCCCTC CCTCTCGTGT CTTTCATTTT
 201  CCTGGGGCTC CGGGGCGCGG AGAAGCTGCA TCCCAGAGGA GCGCGTCCAG
 251  GAGCGGACCC GGGAGTGTTT CAAGAGCCAG TGACAAGGAC CAGGGGCCCA
 301  AGTCCCACCA GCCATGCAGA CCTGCCCCCT GGCATTCCCT GGCCACGTTT
 351  CCCAGGCCCT TGGGACCCTC CTGTTTTTGG CTGCCTCCTT GAGTGCTCAG
 401  AATGAAGGCT GGGACAGCCC CATCTGCACA GAGGGGGTAG TCTCTGTGTC
 451  TTGGGGCGAG AACACCGTCA TGTCCTGCAA CATCTCCAAC GCCTTCTCCC
 501  ATGTCAACAT CAAGCTGCGT GCCCACGGGC AGGAGAGCGC CATCTTCAAT
 551  GAGGTGGCTC CAGGCTACTT CTCCCGGGAC GGCTGGCAGC TCCAGGTTCA
 601  GGGAGGCGTG GCACAGCTGG TGATCAAAGG CGCCCGGGAC TCCCATGCTG
 651  GGCTGTACAT GTGGCACCTC GTGGGACACC AGAGAAATAA CAGACAAGTC
 701  ACGCTGGAGG TTTCAGGTGC AGAACCCCAG TCCGCCCCTG ACACTGGGTT
 751  CTGGCCTGTG CCAGCGGTGG TCACTGCTGT CTTCATCCTC TTGGTCGCTC
 801  TGGTCATGTT CGCCTGGTAC AGGTGCCGCT GTTCCCAGCA ACGCCGGGAG
 851  AAGAAGTTCT TCCTCCTAGA ACCCCAGATG AAGGTCGCAG CCCTCAGAGC
 901  GGGAGCCCAG CAGGGCCTGA GCAGAGCCTC CGCTGAACTG TGGACCCCAG
 951  ACTCCGAGCC CACCCCAAGG CCGCTGGCAC TGGTGTTCAA ACCCTCACCA
1001  CTTGGAGCCC TGGAGCTGCT GTCCCCCCCA ACCCTTGTTT CCATATGCCG
1051  CAGACCCATA GCCGCCTGCA AGGCAGAGAG GACACAGGAG AGCCAGCCCT
1101  GAGTGCCGAC CTTGGGTGGC GGGGCCTGGG TCTCTCGTCC CACCCGGAGG
1151  GCACAGACAC CGGCTTGCTT GGCAGGCTGG GCCTCTGTGT CACCCACTCC
```

Fig.2A

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```
1201  TGGGTGCGTG CAGACCCTTC CCCTCCACCC CCCAGGTCTT CCAAGCTCTG
1251  CTTCCTCAGT TTCCAAAATG GAACCACCTC ACCTCCGCAG CACCCGACTT
1301  ACCAGGACGC ATGCCCCTCC CTCTGCCCTC ATCAAACCCA CAGACCCGGA
1351  CTCCCTTTCT GCCACCCCAG GCTGGTCCGG CCCCAGGTGT GGGGTCCGCT
1401  CTCTCCACTC CCAGGGCTCC GCGCCCAAGT GAGGGGGCCC CTGCCGGAGC
1451  CTCAGACACA CTGGAGTTCA GGGCTGGGGG GGCCTTGGCA CATACCTGTC
1501  CCTTGGCTAT GAGCAGGCTT TGGGGGCCCT TCCGCGGCAG CCCCGGGGGC
1551  CGAGGTAGGG TCTGGGGGCT TAGAGGCTGG GATGGCTCCT GGCCCCACCG
1601  CCAGGGGGCA AGCGCAGGCC GGGCTGGGAG GCGGCGGCGG CGGCTCGGGC
1651  TGGGGGGTCA GGTGGACGCT GCCTCCGGGG CTGGTCGCGC ATCCCTCAGT
1701  CCCTCGGCCA CCCGGGGGTC GCTCCCTCGT GCCCACCGCA CCTGCCGAGC
1751  CTCTTTGGAC CCAGATCTGT TCATGCTTTT GTCTTCGTCA CTGCGGCGGG
1801  GCCCTTTGAT GTCTTCATCT GTATGGGGTG GAAAAATCAC CGGGAATCCC
1851  CCTTCAGTTC TTTGAAAAAG TTCCATGACT CGAATATCTG AAATGAAGAA
1901  AACAAACCGA CTCACAAACC TCCAAGTAGC TCCAAATGCA ATTTTTAAAA
1951  TGGAAAACAA AAATCTGAAA GAAACGTCTT TAGTGGCTTT AAGCCCCAAA
2001  ACGTCCCTAA GGCGTCCTCG AGATGAAGAC GGGGGGGAGC CCCAGCCAGG
2051  TGGAGACCCC GCAGGACGCG GCGGCGCCCG GTGACCGAGG CCTCGCACAG
2101  CCGGCCGCCC TGAGGGTCGG GCCGAGCCAG GGTCCAAGAG GGGCGCGTTT
2151  GTGTCTCGGG TTAAAATAAG GTTCCGTCCG
```

Fig.2B

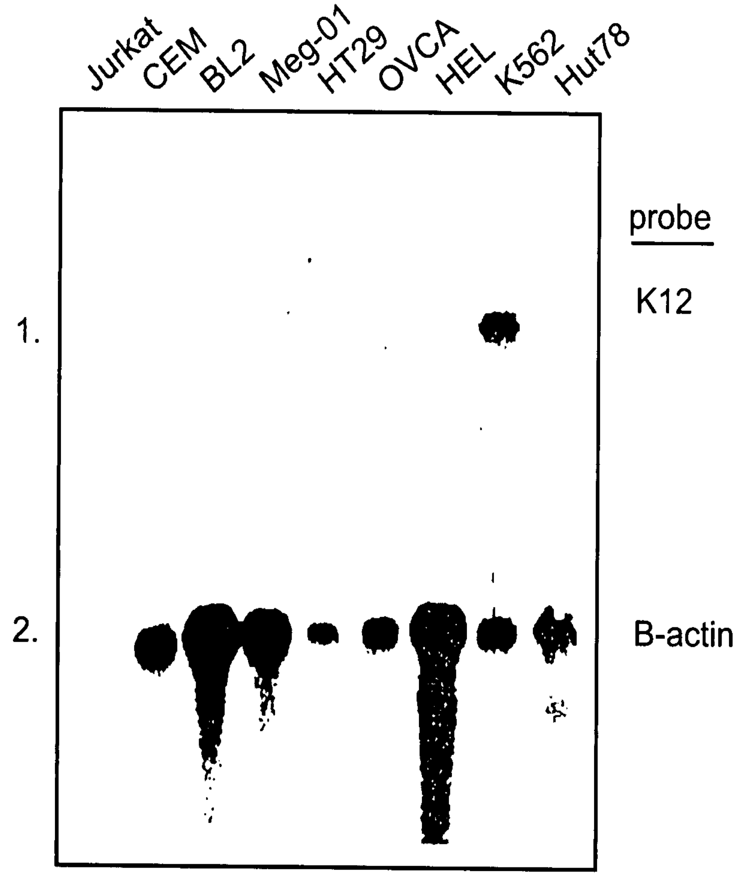
Jurkat
CEM
BL2
Meg-01
HT29
OVCA
HEL
K562
Hut78
probe
1.
K12
2.
B-actin

Fig.3A

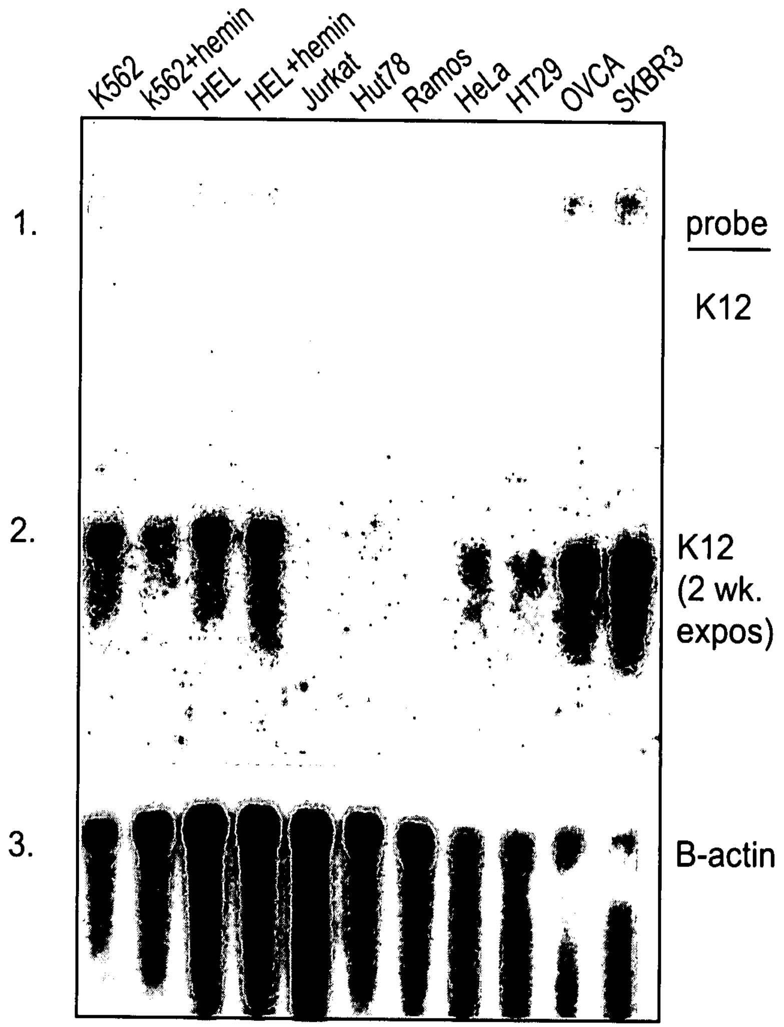
K562
k562+hemin
HEL
HEL+hemin
Jurkat
Hut78
Ramos
HeLa
HT29
OVCA
SKBR3
probe
1.
K12
2.
K12
(2 wk.
expos)
3.
B-actin

Fig.3B

10080522.010603

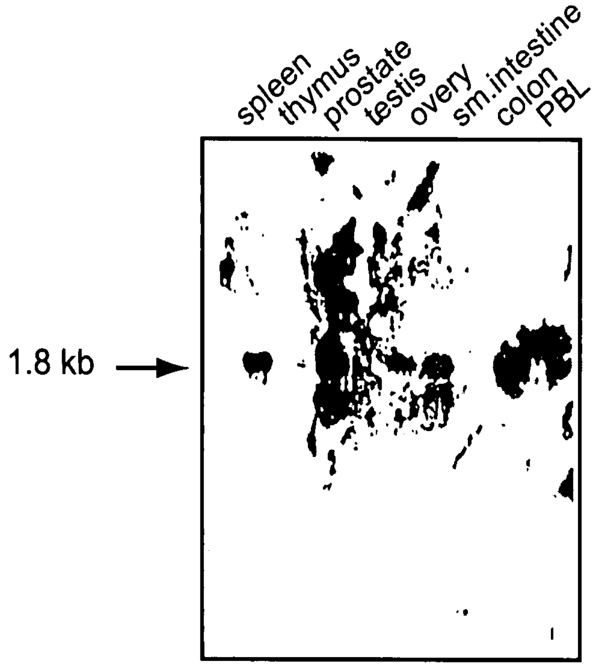
spleen
thymus
prostate
testis
overy
sm.intestine
colon
PBL
1.8 kb

Fig.3C

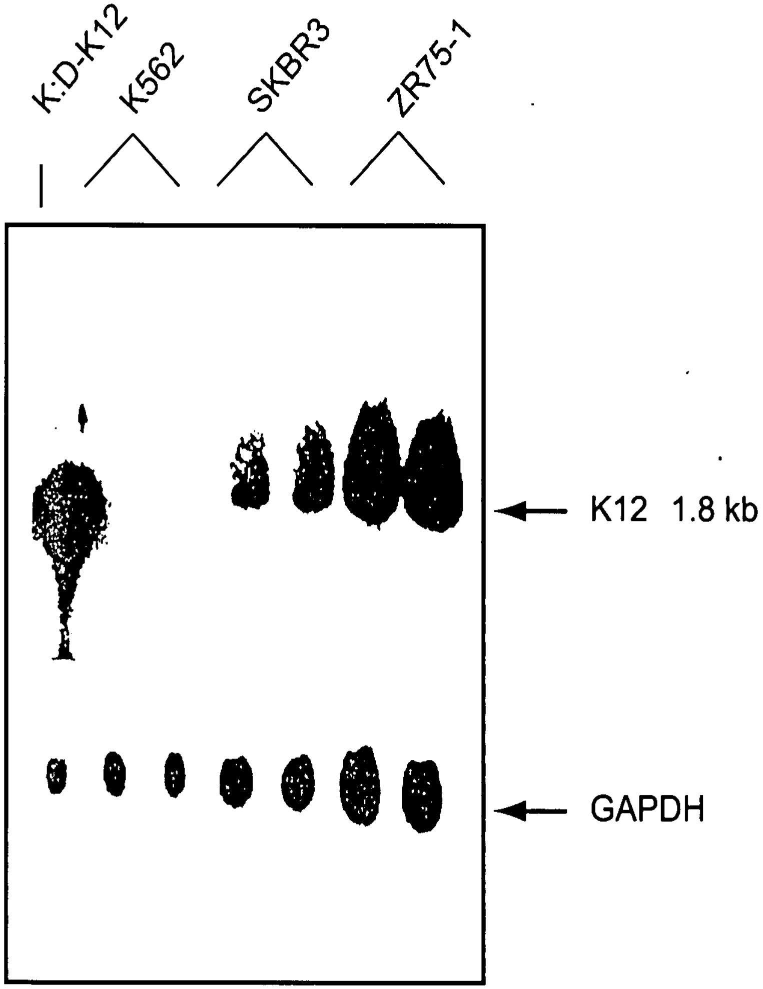
K:D-K12
K562
SKBR3
ZR75-1
K12 1.8 kb
GAPDH

Fig.3D

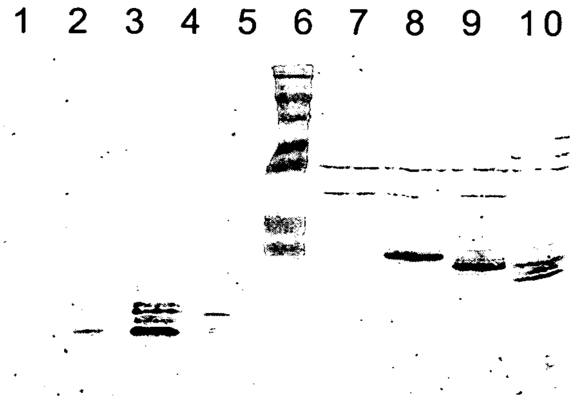
1
2
3
4
5
6
7
8
9
10

Fig.4

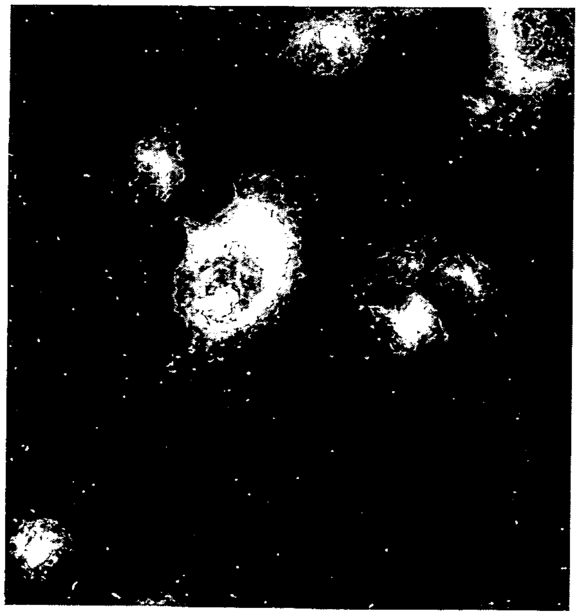

Fig.5A

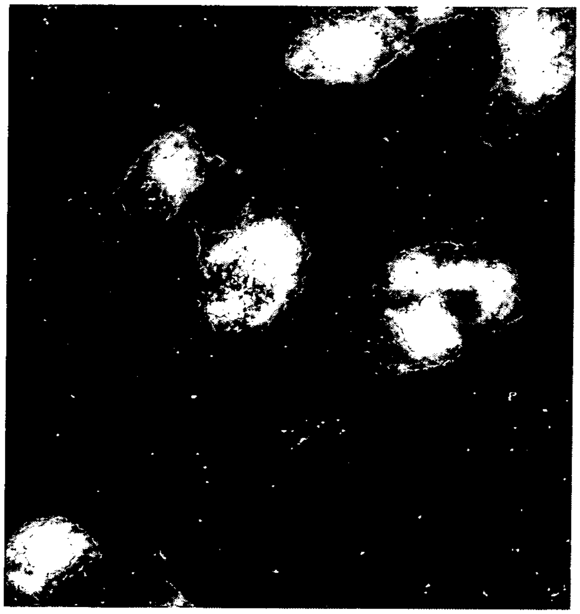

Fig.5B

10080522 .010603

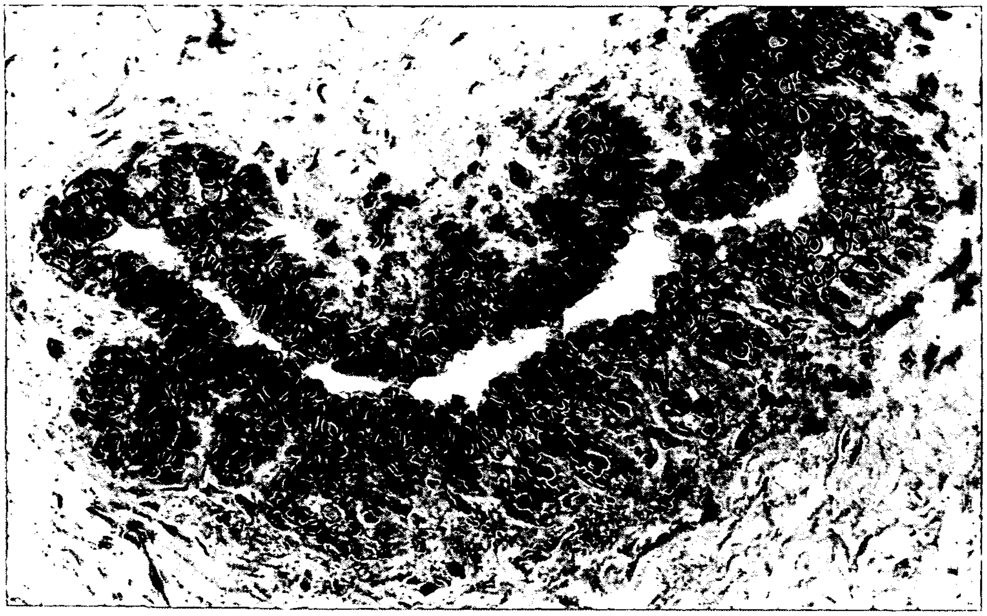

Fig.6A

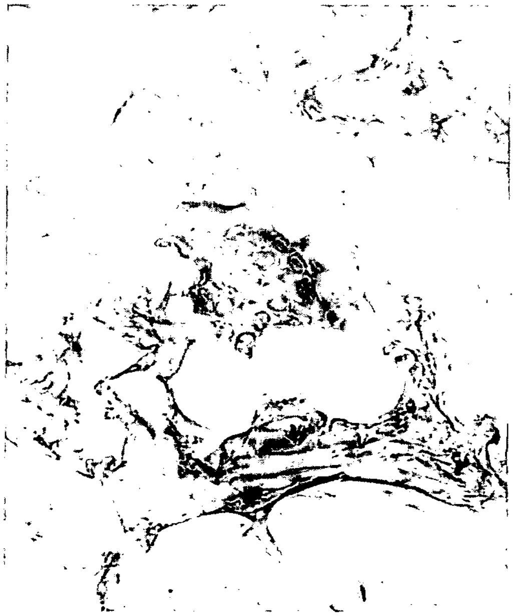

Fig.6B

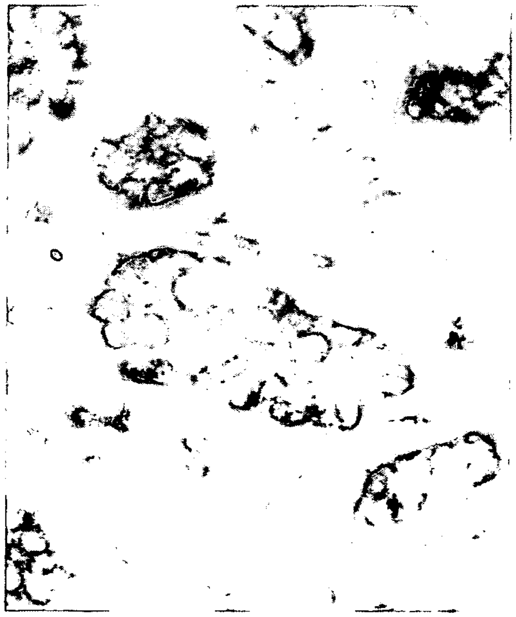

Fig.6C

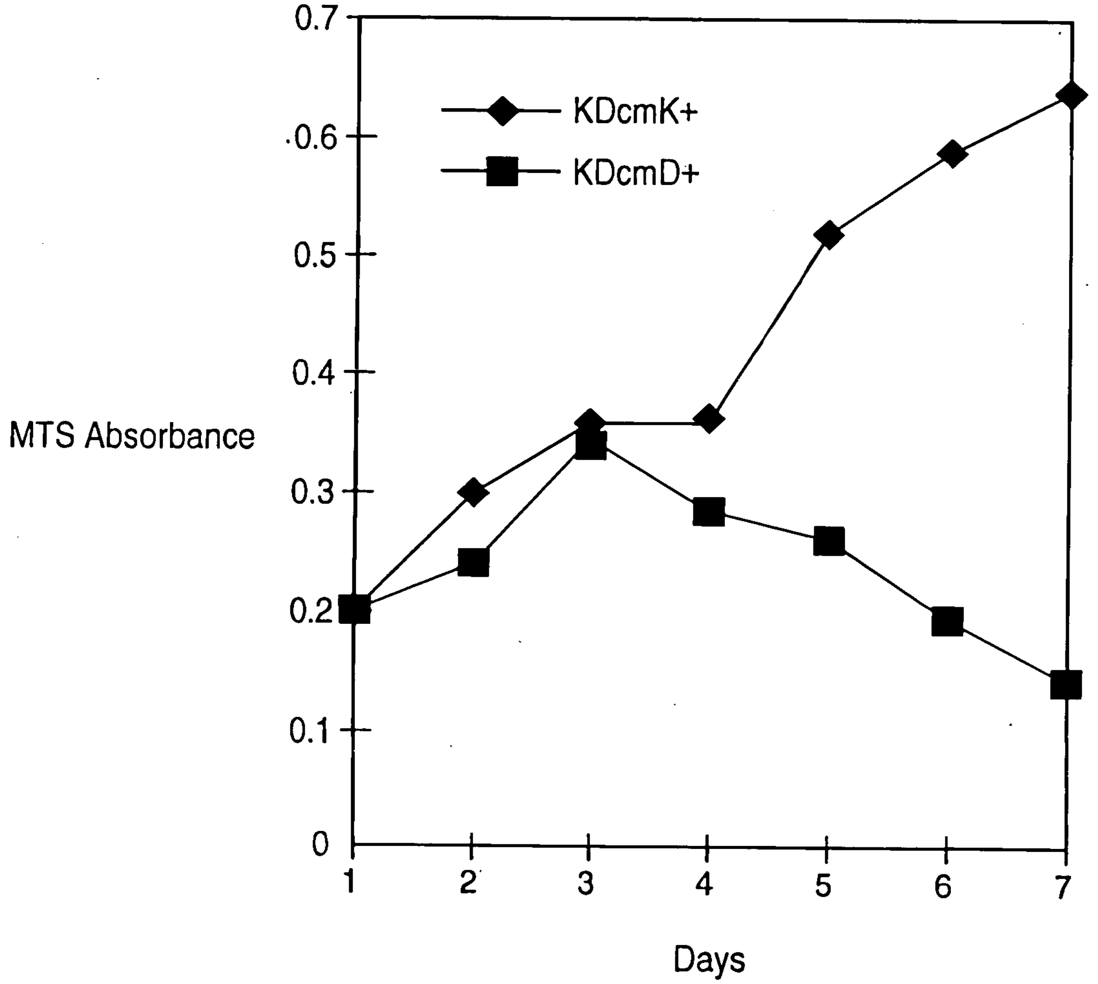

Fig.7